

**Strand:** Measurement  
**School:** Beryl Ford

**Grade:** ¾ split

Lesson Goal	Diagnostic lesson
Curriculum Expectations	<ul style="list-style-type: none"> <li>- Read time using analogue clocks, to the nearest five minutes, and using digital clocks, and represent time in 12-hour notation (Grade 3)</li> <li>- Solve problems involving the relationships between minutes and hours, hours and days, days and weeks, and weeks and years, using a variety of tools (Grade 3)</li> <li>- Estimate, measure and represent time intervals to the nearest minute (Grade 4)</li> <li>- Estimate and determine elapsed time, with and without using a time line, given the durations of events expressed in five-minute intervals, hours, days, weeks, months, or years (Grade 4)</li> </ul>
Big Idea(s)	Attributes, Units, and Measurement Sense

3 Part Lesson Plan		Materials
Getting Started (Minds On...)		
Instructional Grouping: pairs → whole class <ul style="list-style-type: none"> <li>- Teacher shows a clock and asks students if they know the name of the type of clock (analogue) and where they can find one in the classroom. They are then asked if they know the name of another type of clock (digital) and where they can find one.</li> <li>- A digital clock is shown on the lcd screen with a time and students are asked to show the same time on their analogue clocks. The teacher does this a few times with the times shown increasing in difficulty.</li> <li>- Students are then shown analogue times on the lcd screen and are asked to write the time down on their whiteboards.</li> <li>- Teacher asks students if they know how many minutes are in an hour.</li> <li>- Students watch and sing along to the “Hip Hop Around the Clock” video.</li> </ul>		<ul style="list-style-type: none"> <li>- Analogue clocks for each pair</li> <li>- Personal whiteboards or newsprint</li> <li>- Online analogue and digital clocks from <a href="http://www.oswego.org">www.oswego.org</a></li> <li>- Hip Hop Around the Clock video from <a href="https://www.youtube.com/watch?v=...">youtube</a></li> </ul>
Working On It (Action!)		
Instructional Grouping: pairs <ul style="list-style-type: none"> <li>- Students are asked about different kinds of parties they have been to/know about.</li> <li>- Teacher tells students that their parents are allowing them to have a party. As a class, students brainstorm a couple of ideas of things they could do at a party and then complete the brainstorming list with a partner on their whiteboards. Students are also asked to think about how much time should be given to each of their activities.</li> <li>- Pairs share their ideas with the class and the Teacher writes activities down on the board for students to refer to if need be.</li> <li>- Students are presented with a parallel task: A) Plan a three and a half hour party, or B) plan a party from 2:00 to 5:00. For either option, students are asked to:               <ul style="list-style-type: none"> <li>think about a party that you have been to</li> <li>what things do you enjoy doing at parties?</li> <li>think about how long each activity should be</li> </ul> </li> <li>- Students show their thinking on their whiteboards.</li> </ul>		<ul style="list-style-type: none"> <li>- Personal whiteboards or newsprint</li> <li>- Analogue clocks</li> <li>- Pre-made organizational charts for students who find it difficult to organize information</li> </ul>

Reflecting and Connecting (Consolidate/Debrief)	
<p>Debrief Strategy: Math Congress</p> <ul style="list-style-type: none"> <li>- Before debriefing, pairs are asked to explain their thinking to another pair.</li> <li>- Teacher chooses a variety of strategies to share with the class through a Math Congress.</li> <li>- The Teacher highlights the different strategies. Questions from Teacher include: Can you explain your strategy? Are your time limits reasonable? How can you verify that the party will take three or three and a half hours? Why did you organize the information the way you did?</li> <li>- Teacher helped students make connections between minutes, hours, and elapsed time.</li> </ul>	
Follow-up	
<ul style="list-style-type: none"> <li>- If time permits, students can be given a graphic organizer, based on an invitation, to schedule the activities at their party.</li> </ul>	